

a vehicle involved in the accident, brakes, and a suspension system of the vehicle involved in the accident; generating, at the one or more processors, a damages dataset based upon the analysis;

generating, at the one or more processors, a transaction including an identifier for a vehicle involved in the vehicle accident and the damages dataset; and transmitting, at the one or more processors, the transaction including the identifier for the vehicle involved in the vehicle accident and the damages dataset to at least one other participant via the distributed ledger.

2. The computer-implemented method of claim 1, wherein the sensor data is received from the vehicle involved in the vehicle accident.

3. The computer-implemented method of claim 1, wherein the sensor data is vehicle data indicative of speed, position, orientation, location, impact, or combinations thereof.

4. The computer-implemented method of claim 1, wherein analyzing the plurality of vehicle components, further comprises:

- collecting, at the one or more processors, accident data from the plurality of vehicle components.

5. The computer-implemented method of claim 1, wherein analyzing the plurality of vehicle components, further comprises:

- determining, at the one or more processors, a subrogation claim related to the vehicle accident;
- generating, at the one or more processors, a smart contract related to the subrogation claim; and
- deploying, at the one or more processors, the smart contract to the distributed ledger.

6. The computer-implemented method of claim 5, further comprising, for the subrogation claim, identifying a claimant with a first cryptographic public key, and identifying a defendant with a second cryptographic public key; and, subsequently, sending data including a message signed by private keys corresponding to the first and second public keys identifying the claimant and the defendant in a smart contract.

7. The computer-implemented method of claim 6, wherein the claimant and defendant generate the public and private keys offline, and only the public keys are provided to other network participants.

8. The computer-implemented method of claim 1, wherein generating the damages dataset, further comprises:

- determining, at the one or more processors, a component status for each member of the plurality of vehicle components.

9. The computer-implemented method of claim 1, wherein the damages dataset includes an insurance provider for the vehicle involved in the vehicle accident.

10. The computer-implemented method of claim 1, wherein generating the transaction, further comprises:

- augmenting, at the one or more processors, the transaction with identity data for the vehicle;
- generating, at the one or more processors, a cryptographic signature based upon the transaction; and
- augmenting, at the one or more processors, the transaction with the cryptographic signature.

11. The computer-implemented method of claim 1, wherein transmitting the transaction to at least one other participant, further comprises:

transmitting, at the one or more processors, the transaction to a smart contract stored on the distributed ledger.

12. The computer-implemented method of claim 1, wherein the plurality of vehicle components further includes:

- tires of the vehicle involved in the accident;
- air bags of the vehicle involved in the accident; and
- a steering wheel of the vehicle involved in the accident.

13. A computer-implemented method for interacting with a distributed ledger maintained by a plurality of participants, the method comprising:

- receiving, at one or more processors, sensor data indicative of a vehicle accident;
- determining, at the one or more processors, that the vehicle accident has occurred based on the received sensor data;
- analyzing, at the one or more processors, a plurality of vehicle components for a vehicle involved in the vehicle accident to assess potential damage, the plurality of vehicle components including an engine of a vehicle involved in the accident, and brakes, and a suspension system of the vehicle involved in the accident;
- generating, at the one or more processors, a damages dataset based upon the analysis;
- creating, at the one or more processors, a distributed ledger for the vehicle involved in the vehicle accident;
- deploying, at the one or more processors, a smart contract including the damages dataset and an identifier for the vehicle involved in the vehicle accident on the distributed ledger;
- generating, at the one or more processors, a transaction including the identifier for a vehicle involved in the vehicle accident and the damages dataset; and
- transmitting, at the one or more processors, the transaction including the identifier for a vehicle involved in the vehicle accident and the damages dataset to at least one other participant in the distributed ledger.

14. The computer-implemented method of claim 13, wherein the sensor data is vehicle data indicative of speed, position, orientation, location, impact, or combinations thereof.

15. The computer-implemented method of claim 13, wherein analyzing the plurality of vehicle components, further comprises:

- collecting, at the one or more processors, accident data from the plurality of vehicle components.

16. The computer-implemented method of claim 13, wherein analyzing the plurality of vehicle components, further comprises:

- determining, at the one or more processors, a subrogation claim related to the vehicle accident;
- generating, at the one or more processors, a smart contract related to the subrogation claim; and
- deploying, at the one or more processors, the smart contract to the distributed ledger.

17. The computer-implemented method of claim 13, wherein generating the transaction, further comprises:

- augmenting, at the one or more processors, the transaction with identity data for the vehicle;
- generating, at the one or more processors, a cryptographic signature based upon the transaction; and
- augmenting, at the one or more processors, the transaction with the cryptographic signature.